

CHAPTER 23

By:

Etisha Jain

Vishu Goyal

LINUX 23.1 Understanding RHEL 8 Firewalling

- firewall starts at the kernel level
- becoz the kernel is expecting the network package that come in, go out and are forwarded.
- The kernel is using a net filter in order to do so. and its a integrated part of the linux kernel. but we need to tell net filter what is going to happen
- and in order to do so there is an net fiter on the top of the kernel which is NF tables.
- NF tables is the low level interface , NF tables distribute the command but this command is complicated
- In previous version the interface is IP tables
- as NF tables is so difficult to use fortunately there is an easier interface to work with NF tables
- using Firewallld you are going to write NF tables rules
- but just as a easy to understand and human friendly syntax

LINUX 23.2 Understanding Firewalld Components

- Firewalld is using different components to make firewalling easier
- Service : the main component, contains one or more ports as well as optional kernel modules that should be loaded
- Zone : a default configuration to which network cards can be assigned to apply specific settings
- These configurations are used to make a distinction between an internal network interface and an external network interface, because obviously you want something else to be happening for incoming traffic from the internet and incoming traffic from the trusted network
- Ports : optional elements to allow access to specific ports
- Additional components are available as well, but not frequently used in a base firewall configuration

PRACTICAL

- **firewall-cmd --list-all**

LINUX 23.3 Configuring a Firewall with firewall-cmd


- The firewall-cmd command is used to write firewall configuration
- Use the option --permanent to write to persistent (but not to runtime)
- Without --persistent the rule is writtern to runtime (but not to persistent)

PRACTICAL

- firewall-cmd --get-services
- friewall-cmd --add-service ftp
- firewall-cmd --reload
- firewall-cmd --list-all
- firewall-cmd --add-service ftp --permanent
- firewall-cmd --list-all
- firewall-cmd --add-service ftp
- firewall-cmd --list-all

LINUX 23.4 Using firewall-config

- `yum search firewall-config` to get the package name
- `yum install firewall-config`
- `firewall-config` it is a graphical utility
- `ctrl + Z`
- `bg`
- `firewall-cmd --list-all`
- `fg`
- `ctrl +c`

The image features a solid black background. At the top, there is a decorative, wavy horizontal band with a color gradient. From left to right, the colors transition from a bright yellow, through orange and red, into a dark green, and finally into a light cyan or blue at the far right edge. The waves in the band are smooth and fluid, creating a sense of motion.

THANK YOU